

July 31, 1948.

Dr. S. C. Rittenberg,
Department of Bacteriology,
University of So. California
Los Angeles 7, Calif.

Dear Dr. Rittenberg,

You may be interested to hear the disappointing results of our first moderately conclusive tests for recombination in a *Salmonella* strain. Working with S-21, a lysogenic, monophasic typhi-murium received from P.R. Edwards, we first isolated a pair of biochemical mutants requiring tryptophane and isoleucine/valine respectively. Then an arabinose-negative mutation was obtained in the first, and a galactose-negative mutation in the second of the mutants. When plated together on glucose-synthetic agar, the mixed cultures gave rise to a very few prototrophs, but as none of those showed any recombination of the fermentative characteristics (i.e., all were either Ar-Gal⁺ or Ar⁻/Gal⁻) these were undoubtedly reversions of the biochemical requirements; such as could be observed occasionally in the single cultures. Of course, we may merely not have hit upon the right conditions, but we are moving on to other strains. I hope that Mr. Oppenheimer has had more encouragement.

The coli work, on the other hand, has progressed considerably with the finding of a heterozygote (delayed reduction) which is continually splitting off all the recombination classes.

Yours sincerely,

Joshua Lederberg
Assistant Professor of Genetics.